STRUCTURAL TRANSFORMATION AND SPECIALIZATION PATTERNS IN THE PRODUCT SPACE – ASSESSING CHINA AND INDIA

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Abstract

This paper assesses the specialization patterns of China and India, studies the goods that are related to the core of capabilities of the countries, and then investigates the products that allow the referred countries to improve the average "income content" of their export basket. Following Hausmann et al. (2007) we compute indicators of "income content" of a country's export basket and measures of "density" which assess the likelihood of a country developing comparative advantage in one good given the current specialization pattern. The results obtained suggest that both countries are making their structural transformation into two main sectors, "Machinery" and "Chemicals, plastics, rubbers", are becoming specialized in higher "income content" goods, and are abandoning traditional sectors like "Footwear and Clothing" and agricultural products.

Keywords: Revealed Comparative Advantage, Structural Transformation, Upscale Opportunities

1. Introduction

For the last couple of decades the World has seen a "catch-up" of the emerging economies to the so called "rich" countries. Leading the spectacular, and surprising, growth by these economies is China, closely followed by India, OECD (2010, 2011). These emerging economies were mainly countries specialized in low-skilled labour intensive goods, but that now are having a structural change that allow them to specialize in higher "income content" goods.

This paper assesses the specialization patterns of China and India, studies the goods that are related to the core of capabilities of the countries, and then investigates the products that allow the referred countries to improve the average "income content" of their export basket. We follow Hausmann et al. (2007), which conducted studies on the relationship between pairs of products and the effects of those relations on economic performance. Also Hidalgo et al. (2007), following the work done by Hausmann and Klinger (2006, 2007), assessed the impact of the RCA on a country's specialization pattern and in the process of structural transformation, which is basically the shifting of a specific country specialization pattern towards a more "sophisticated" basket of goods.

To assess how much of an impact a specific basket of goods, in which a country specializes, have on economic performance and productivity, Hausmann et al. (2007) built a measure of "sophistication" or "productivity content" for the traded goods. The authors called this measure the PRODY index. Products with high PRODY values are typically those exported by the high income countries, where the comparative advantages acquired in the production of those high PRODY level products are determined by factors other than labour costs, such as technology, advanced knowledge, public spending, research and development and many more. To have a base line

comparison at country level, the authors created an index called EXPY, which is the average sophistication level of a country's export basket of goods. This measure presents the international situation of a country.

Then we move on to assess how valuable the productive experience with one specific product is to produce other products. To do so, Hausmann and Klinger (2006, 2007) and Hidalgo et al. (2007) created a measure that allow the study of possible relations between pairs of products, basically measures the probability of a specific country to develop Revealed Comparative Advantage (RCA) in pairs of goods. The authors used a conditional probability estimation method, which basically gives the probability of a country developing RCA in one product given that it has RCA in another product. This gave them the information to construct a measure called "density", which measures the "relatedness" of a specific product with the specialization pattern of a country, basically how close is one specific product to all the products which the country already develop RCA. The authors found evidence that this density index is highly significant in predicting the future of specialization patterns of nations, suggesting that countries move their specialization patterns towards goods more "related" to the current productive experience.

However in our work we follow Freitas and Salvado (2008), which use a PROBIT model that departs from the conditional probability model used by Hausmann and Klinger (2006, 2007) and Hidalgo et al. (2007). To our analysis we are interested in the marginal effects that each product has on the other, the probability of a country having revealed comparative advantage (RCA) in a particular product, given that it has RCA in another product.

In section 2 we describe the data used in our analysis and we explain the methodology and indexes of our work. In section 3 we assess the specialization patterns of both China and India and discuss their consistency. In section 4 we look into the upscale products that could allow the nations to achieve a structural transformation. Conclusions are made in section 5.

2. Data and Methodology

Our calculations use international trade data at the product level (HS-4), from the UN-COMTRADE database and per capita GDP levels (in PPP) by the IMF, World Economic Outlook Database, April 2007. The data refers to the year of 2005 and covers 1245 products of 93 countries with population larger than 2 million people.

2.1. The PRODY index

Hausmann et al. (2007) suggested an indicator which assesses the sophistication level, or the "income content", of a specific product. The PRODY index is defined as the weighted average of the per capita incomes of the countries exporting that product, where the used weights are proportional to the country's index of revealed comparative advantage (RCA) in that product. Formally for each product *i*,

$$PRODY_i = \sum_{c\in T} \sigma_{ic}\, Y_c \text{ , with } \sigma_{ic} = \frac{RCA_{ic}}{\sum_{d\in T} RCA_{id}} \text{ , } RCA_{ic} = \frac{X_{ic}/X_c}{X_i/\sum_{d\in T} X_d} \qquad (1)$$

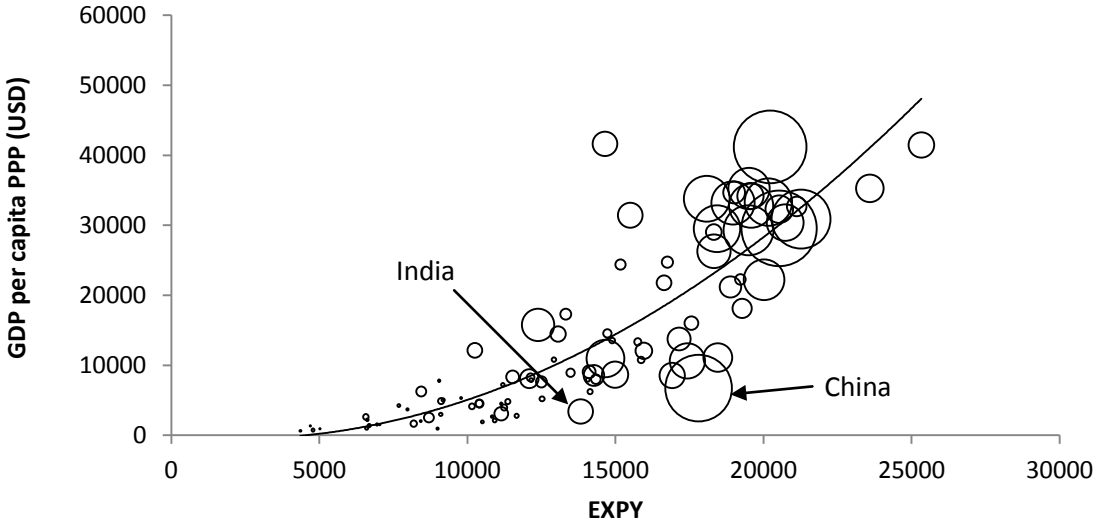
where Y_c is the real per capita GDP in country *c*, X_c is the total exports of country *c*, X_i denotes for the world exports of product *i*, X_{ic} are the exports of the product *i* for the country *c*. T is the set of countries in the data and the weights σ_{ic} normalize the Balassa index of RCA of the c-country with respect to all the countries exporting the same product. Note that products with high PRODY value are those typically those exported by the high income countries, opposed to the low income countries which tend to export less sophisticated products with low PRODY index.

2.2. The EXPY index

The EXPY index is used to assess the average sophistication level of the total exports of a country. This index is defined as the weighted average of the PRODY indexes, being the weights the export shares of each product in the total exports of the country. Formally, for each country *c*, the EXPY index is mathematically defined as:

$$EXPY_c = \sum_i \left(\frac{X_{ic}}{X_c}\right) PRODY_i \quad (2)$$

Figure 1: Crossing EXPY with per capita GDP



Source: Author's calculations. Circles are proportional to the exports shares of each country in the total World's exports.

Following Hausmann et al. (2007), Figure 1 relates the EXPY index with the per capita GDP for the countries in our sample. We see a positive correlation between the two variables, giving us evidence that high income countries tend to export products that have high "income content. The authors also concluded that the EXPY indicator is a strong and robust predictor of economic growth, after controlling for the standard covariates.

2.3. Value Increments

We now focus on the role of the previous indexes when we analyze the opportunities for a given country in the process of structural transformation (shifting the export basket towards a more sophisticated basket of goods). The products that can do this effect are those with higher PRODY than the country's average level, the EXPY, they are called "Upscale products". Formally, for product *i* to be considered an upscale product it is computed as:

$$100 \times \ln\left(\frac{PRODY_i}{EXPY_c}\right) > 0 \qquad (3)$$

From now on, we will refer to the later expression as the "Value Increment" associated to the product *i* in country *c*.

2.4. Revealed Relatedness Indexes (RRI)

Now, we analyze how the productive experience with one product is helpful to produce other products. Accordingly to Hausmann and Klinger (2006, 2007), if the productive capabilities of a country are easily adapted to the production of goods, then the probability of that country developing RCA in specific products in the future is affected by those capabilities. The authors developed an index called "proximity", which basically pairs up the connections between the products and gives them feedback about the future probability of one country developing revealed RCA in one product, given that it has RCA in the other product.

However, in our model we follow Freitas and Salvado (2008) to estimate the relatedness between products. The RRI are estimated using a PROBIT regression method, where the probability of a country developing RCA in one product is conditional on having RCA in another product. Formally,

$$x_{ic} = \begin{cases} 1 & if \quad RCA > 1 \\ 0 & if \quad RCA \leq 1 \end{cases} \qquad (3)$$

where x_{ic} is a dummy variable, which takes the value of one if country *c* has RCA in product *i*, and the value zero otherwise.

Then the model extracts the increment in probability, the marginal effects, of having RCA in one product due to have RCA in the other product for the entire sample of products and for all the 93 countries. Formally for each possible pair of products (*i*,*j*):

$$P(x_{jc} = 1 | x_{ic}) = G(\alpha_0 + \alpha_1 x_{ic}), \quad (4)$$

where the function G is the standard normal cumulative distribution function. One possible case is that when α_1 = 0 then the probability of developing RCA in product *j* does not depend on having RCA in the product *i*.

Formally, the increment in probability (marginal effects) of having RCA in product *j* due to have RCA in product *i*,

$$RRI_{ij} = G(\alpha_0 + \alpha_1) - G(\alpha_0) \quad (5)$$

One important aspect is the significance of the RRI in our model, so a significance test was done using a z statistic with a confidence level of 95%. The non-significant RRI take the value zero in our matrix. So we have estimated a non-symmetric matrix, 1245x1245, of all possible relations between pairs of products.

The method used by Freitas and Salvado (2008) provides three novelties comparing to the work done by Hausmann and Klinger (2006, 2007). The first novelty is the significance test previous explained, furthermore we can see some results in Table 1. The significance test challenges the work done by Hausmann and Klinger (2006, 2007), because as we can see in table 1 we have a large number of non-significant RRI. So these RRI should not be used in order to assess the structural transformation of a country. Hausmann and Klinger (2006, 2007) are probably overestimating their models by using all the possible relations between the products.

Table 1: results of the RRI estimation

	Number	%total
Non-significant	1.299.120	83,88%
Significant	249.660	16,12%
Positive	243.718	15,74%
Negative	5.942	0,38%
Total	1.548.780	100,00%

Source: Author's estimations based on the Freitas and Salvado (2008) framework.

A second novelty is that using this method we allow the RRI to be either positive or negative; this gives us feedback of how much a product is helpful or harmful to the other. To contrast, the work done by Hausmann and Klinger (2006, 2007) only allowed positive relationships between products. Freitas and Salvado (2008) give the example of raw materials and other primary products which have negative RRI with other products.

One interesting example comes with climate: some goods are only produced in a certain type of temperature or humidity, opposing others with completely different conditions, or needs, so that in this case a negative RRI is a more reasonable option. In table 1 we see that we have some negative RRI in our model, about 0,38% of the total estimation.

The third novelty is that the matrix estimated by our model is not symmetric, meaning that, generally:

$$RRI_{ij} \neq RRI_{ji} \quad (6)$$

We can explain this by giving one example: suppose that we are analyzing trains and seat belts, the capabilities of a country having RCA in the production of seat belts to help developing RCA in the production of trains is expected to be very different when we do the opposite thinking. For example some company can produce seat belts specifically for the trains, a synergy. This does not mean that the productive experience in seat belts gives the necessary capabilities to produce trains.

2.5. The inward perspective

The inward perspective assesses the extent to which the country's overall productive experience is helpful to the production of a specific product. Following Hausmann and Klinger (2006, 2007), the probability of a country developing RCA in a particular product in the future depends on the "proximity" that it has with the country's overall export basket, the authors called that measure "density". This density index captures the effect that the country's overall productive experience has on a single product. In this paper we are going to use a different index of density than the one used by the authors and Freitas and Salgado (2008). Adapting the index to our model based on Freitas and Salgado (2008), formally, for each product *j* in country *c*, our density index is given by:

$$\omega_{jc} = \sum_i RRI_{ij} x_{ic} \,, \quad (7)$$

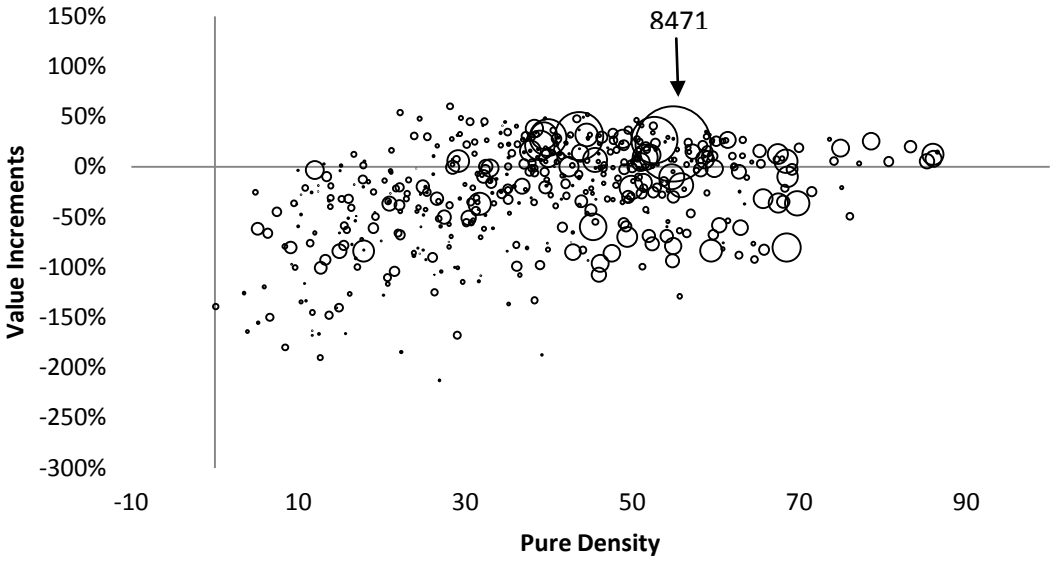
where x_{ic} is the dummy variable defined in (3), and RRI_{ij} is defined in (4) and (5). We call this index 'pure density'. Regarding our density index, following Hausmann and Klinger (2006, 2007), a high index for a specific product *j* suggests that product *j* is much related to the country specialization pattern. In other words, the core of capabilities of country *c* is helpful, and adapted, to the production of product *j*. On the other hand, a low density index suggests that the product *j* is much unrelated to the country's overall productive experience.

3. Specialization Patterns

3.1. The Chinese case

Analyzing the set of products in which China is currently specialized in (RCA>1), the country has 501 products in its specialization pattern. In Figure 2 we cross the value increments with the corresponding pure densities for these products.

Figure 2: The Chinese specialization pattern



Source: Author's calculations. Circles are proportional to the export shares of each product in China's total exports

Remember that a high pure density index suggests that the country's overall productive experience can be very helpful to the production of a specific product, hence very related to the country's specialization pattern. The value increment gives us the information about the products which can increase the overall sophistication level of the country's export basket, the products that can increase the EXPY index, hence the per capita GDP.

In Table 2, we divided the products by categories. First we can see that the set of products in which China is specialized account for about 83% of the country's total exports. The category with the highest export share is "Machinery", with 48 products. Leading this category and the country's exports is "8471-Automatic data processing machines and units thereof" with about 10% of the country's exports with a density value of 55 and a value increment of 23%, meaning that the highest exported good in China increases the average sophistication level of the Chinese export basket.

Table 2: China - Products with RCA>1, broken down by product category

Category	Chapter of HS	Number of products	Share of exports
Agricultural products and food	00-24	49	2,31%
Mineral products and oils	25-27	18	1,33%
Chemicals, plastics, rubbers	28-40	73	4,62%
Wood, wood products, paper	44-49	18	0,99%
Hides, leather and textiles	41-43, 50-60, 63	82	7,15%
Clothing and footwear	61-62,64-67	51	11,59%
Stones, ceramic, glass	68-71	27	1,55%
Metals	72-83	71	5,31%
Machinery	84-85	48	36,56%
Transportation	86-89	10	2,37%
Miscellaneous	90-97	54	8,79%
	Total	**501**	**82,59%**

Source: Author's calculations

The products with the highest density values (top5), those that are more related to the country's specialization pattern, include: "7907-Other articles of zinc" with 0,02% of the Chinese exports; "8501-Electric motors and generators (excluding generating sets)" (0,45% export share); "3926- Other articles of plastics and articles of other materials of headings" (0,79%); "7326- Other articles of iron or steel" (0,37%); "7318-Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter-pin ..." (0,23%). All these products are upscale products (positive value increments), meaning that they elevate the average sophistication level of the Chinese exports.

On the other hand, products like "713- Dried leguminous vegetables, shelled" (0,05%) or "714- Manioc, arrowroot, sweet potatoes and similar roots" (0,01%) have very low density values, and also value increments that decrease the average sophistication level of the Chinese export basket by more than 125%; so they are downscale products, and also very unrelated to the country's core of capabilities.

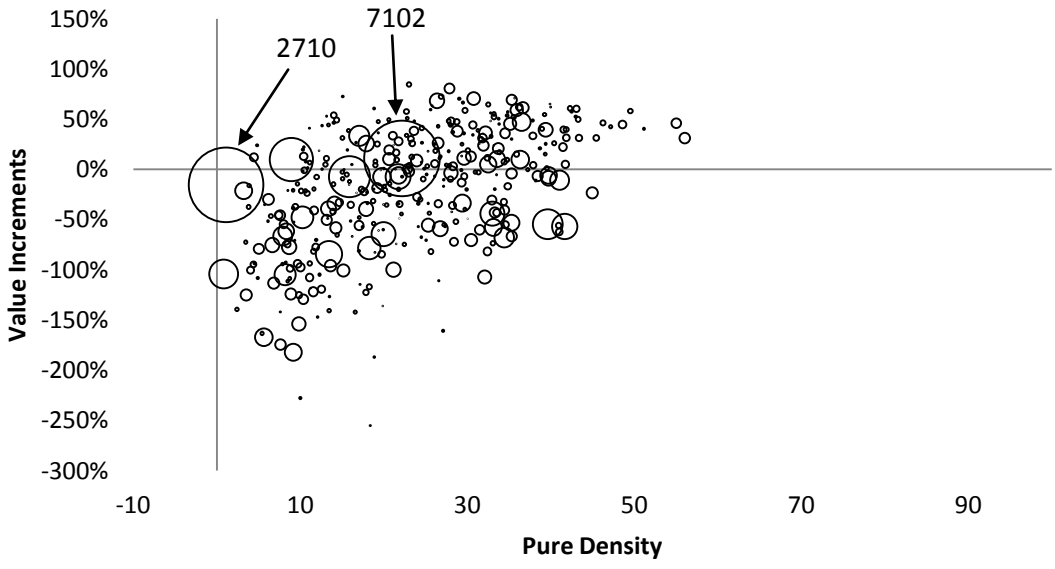
Looking at the top 50 exported products of China, which account for 56% of the Chinese total exports we can see that China have 56 products in which is currently specialized and 4 products in which the country is not specialized (RCA<1). Two

important aspects to be taken: the first is that "8542- Electronic integrated circuits and microassemblies" that ranks number 5 in the exports made by China (1,92%) is not in the country's specializations pattern, China does not have RCA in this product. However it is an upscale product that ranks low in the density index, suggesting that it may happen that this product is not very much related to the country's overall productive experience. Second, "2710- Petroleum oils, other than crude", which China is not currently specialized but exports it in a significant amount (0,84%), has a negative density index indicating that is quite inconsistent with the current Chinese specialization pattern.

3.2. The Indian case

We now focus on the specialization pattern of India. The country has 378 products in its specialization pattern, accounting for 80% of Indian exports. Mimicking the previous figure, Figure 3 crosses the value increments with the corresponding pure densities for the commodities in which India is specialized.

Figure 3: The Indian specialization pattern



Source: Author's calculations. Circles are proportional to the export shares of each product in the total exports made by India

Just by visual observation we can see that India has a product, "2710- Petroleum oils, other than crude", that is largely exported (11,17%) with a very low pure density and negative value increment, so it is a product not related to the country's specialization pattern and it downgrades the sophistication level of the Indian exports.

Table 3: India - Products with RCA>1, broken down by product category

Category	Chapter of HS	Number of products	Share of exports
Agricultural products and food	00-24	56	8,42%
Mineral products and oils	25-27	29	16,63%
Chemicals, plastics, rubbers	28-40	70	8,23%
Wood, wood products, paper	44-49	3	0,13%
Hides, leather and textiles	41-43, 50-60, 63	79	10,54%
Clothing and footwear	61-62,64-67	28	9,15%
Stones, ceramic, glass	68-71	21	16,18%
Metals	72-83	58	7,28%
Machinery	84-85	16	0,96%
Transportation	86-89	9	1,46%
Miscellaneous	90-97	9	0,79%
	Total	**378**	**79,76%**

Source: Author's calculations

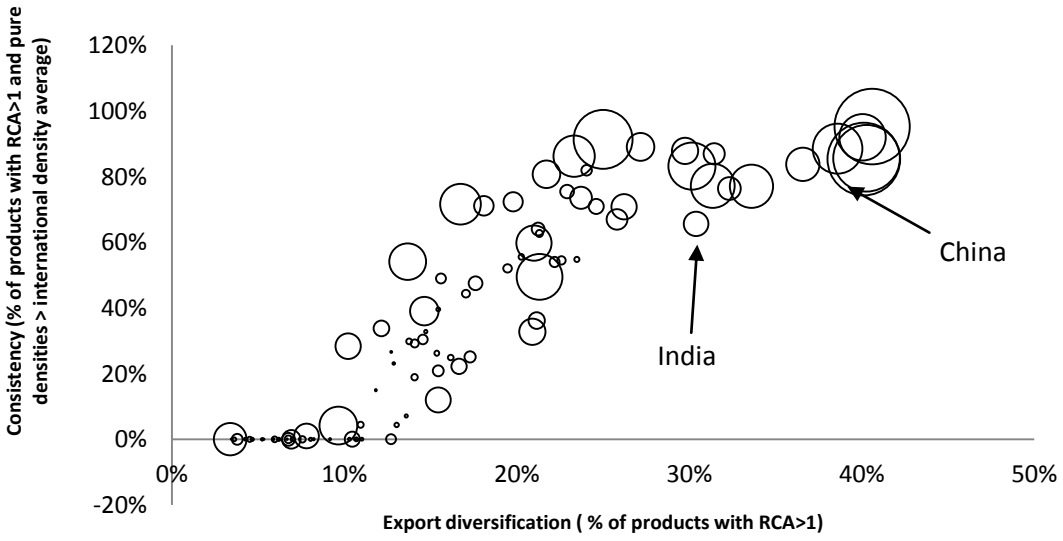
Breaking down the products by category, table 3, we realize that "Mineral products and oils" comes first in terms of exports, with 29 products exported. Also the category "Stones, ceramic and glass" comes in as a close second with "7102-Diamonds, whether or not worked, but not mounted or set" (with 11,39% of the country's total exports) leading the exports of India. Focusing on the products with the higher density index, products that are very consistent with the Indian overall productive experience, for example: "7307-Tube or pipe fittings of iron or ..." (with a export share of 0,22%) or "3812- Prepared rubber accelerators" (0,04%), being these two products upscale, relative to the country's export basket. Opposing, India has goods in which is specialized like "202- Meat of bovine animals, frozen" (0,06%) or "901- Coffee, whether or not roasted or decaffeinated" (0,02%) with very low density levels and negative value increments. These products are both downscale and unrelated to the

country's specialization pattern. Inspecting the top 50 exported products made by India we see that the country has 56 products in which it is specialized and 4 products that are not in its specialization pattern. For example, India does not have RCA in "8703- Motor cars and other motor vehicles principally designed for the transport", which ranks 16th in exports. This product has a sophistication level higher than the average sophistication level of the Indian export basket of about 51%.

3.3. The consistency of the specialization patterns

To see how consistent the specialization patterns of China and India are we need an international comparison. To do so, we use a measure that is the simple average of all the pure density average levels of all the countries in the sample for the products that they are specialized in (RCA>1). We are going to call this measure the international density average (IDA).

Figure 4: Consistency of the specialization patterns for all the countries in the sample



Source: Author's calculations. Circles are proportional to the exports shares of each country in the World's total exports

Note: See appendix 1 for all the countries results

In Figure 4 we present two new indicators: Consistency and Export Diversification. The first is the percentage of products with RCA>1 that have the pure density index higher than the IDA (17,84). The second is the percentage of products with RCA>1 in all the products in the sample. Regarding China, the country has the second highest Export Diversification with a Consistency index of 86% (9th place). As for India, the country ranks 26th in consistency with a Consistency index of 66%, and with an Export Diversification index of 30%. The top country in both indexes is Germany, which indicate that it is the country with more related products to their productive capabilities.

Two important notes: first, we observe a large number of countries, mostly non-developed countries, with a consistency index of zero. This was an expected result since the averages of the densities levels of these countries are low; suggesting that the products in theirs specialization patterns are much unrelated to the countries' overall capabilities. Second, there is a positive correlation between Export diversification and Consistency: as one country exports more products, the productive experience of the country becomes higher, hence higher probability of developing new products in the future.

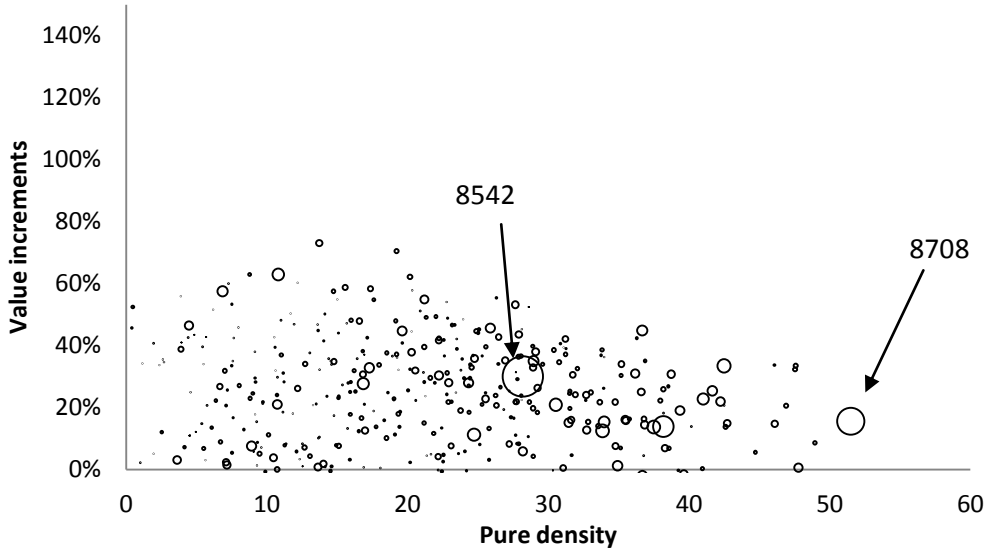
4. Structural transformation

4.1. The upscale opportunities

The focus now is on the products that can elevate the sophistication level of the countries' exports. Those type of products are the upscale products, products with an "income content" (PRODY) higher than the country's average sophistication level (EXPY), making the value increment of these products positive. The importance of this type of products is that it gives the countries the opportunities and experience needed to

start the process of structural transformation, in order to improve the overall productivity of the country and the consequent increase of the standards of living for their citizens. Assessing all the products with RCA<1 that China exports, Figure 5 gives us the same analysis as before, crossing the pure densities and the value increment indexes, just for positive levels.

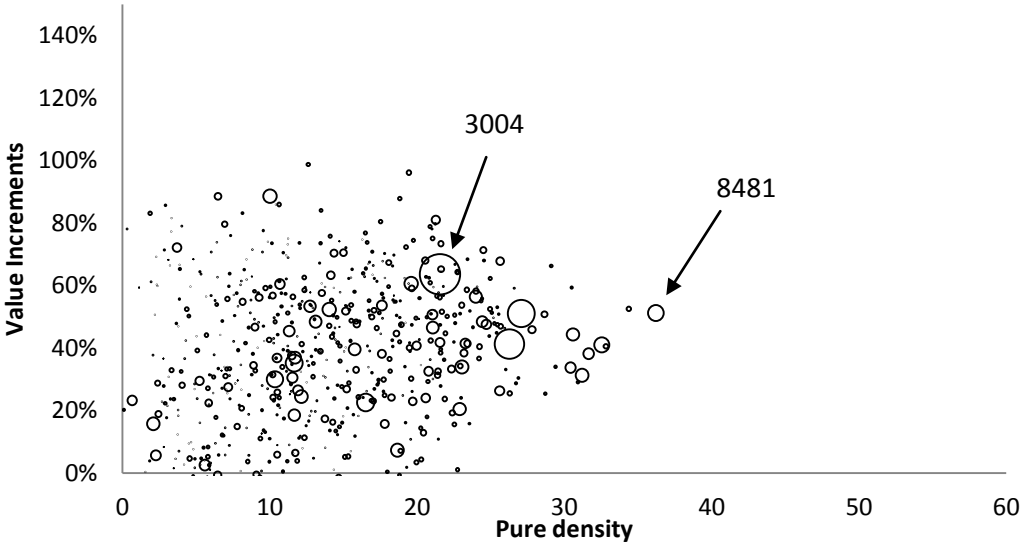
Figure 5: The Upscale opportunities for China



Source: Author's calculations. Circles are proportional to the export shares of each product in the total exports made by China

Keeping the minimum pure density level as before, the IDA, China has 212 upscale products larger than the IDA (=17,84). Leading the upscale opportunities, in terms of density level, comes "8708- Parts and accessories of the motor vehicles…" with an export share of 0,9% in China's total exports. The product with the largest export share in which China is not specialized is "8542- Electronic integrated circuits and microassemblies" (1,92%). Also this product has a pure density index higher than the IDA, suggesting that it is a product related to the current specialization pattern of China that can elevate the sophistication level of the Chinese export basket.

Figure 6: The upscale opportunities for India



Source: Author's calculations. Circles are proportional to the export shares of each product in the total exports made by India

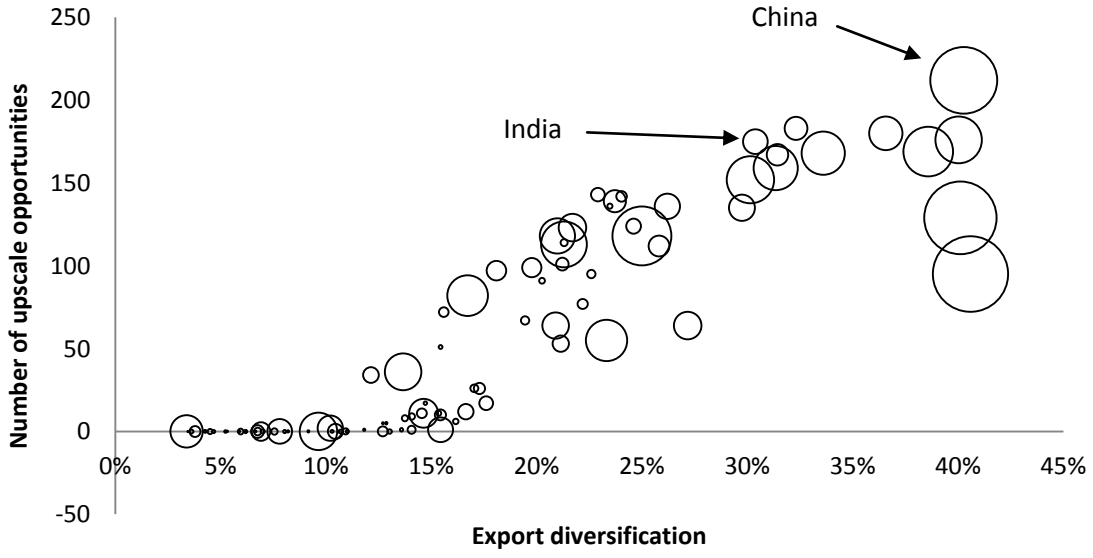
As for India, Figure 6 mimics the previous Figure 5. India has 175 upscale products higher than our IDA measure. The product closer to the Indian overall capabilities is "8481- Taps, cocks, valves and similar appliances for pipes, boiler shells" with an export share of 0,3% in Indian total exports. The product with the highest export share of the upscale opportunities is "3004-Medicaments (excluding goods of heading…)" with an export share of 2% in India's total exports.

In Appendix 2 we mimic the work done for India and China and present visual figures for a sample of countries worldwide. Those countries are: Brazil, Portugal, Spain, Russia, Madagascar, Korea, Turkey, Germany and USA. There we can see that the more developed countries, like USA and Germany, have products with higher densities, suggesting that those products are "ready" to start developing comparative advantages. Opposing that, we have Madagascar and Russia, countries that have much more lower levels of the density index for the upscale opportunities, suggesting that a structural transformation is harder to achieve for these countries. In an intermediate

situation we have countries like Portugal, Turkey, Korea or Spain, which are on a better situation for a structural transformation, with a range of products that can elevate the overall sophistication level of their export basket, in order to make them more productive.

However to fully assess these findings we need some international outlook. To do so we are going to compute the number of upscale opportunities, higher than the IDA, for all the countries in our sample. In Figure 7, we cross the number of upscale products with the export diversification index. In our sample, China ranks 1st and India 5th in the number of upscale opportunities higher than our benchmark measure IDA. Again the low income countries are the worst case; most have zero upscale opportunities. Figure 7 points to a positive relation between the number of upscale products and export diversification.

Figure 7: Upscale opportunities – International outlook



Source: Author's calculations. Circles are proportional to the export shares of each country in the total World's exports

Note: See Appendix 1 for all the countries results

4.2. Analyzing the upscale opportunities

First, we focus on the value aspect of the upscale opportunities. On Table 4 we have the number of upscale opportunities divided by PRODY level for the products in our sample of countries.

Table 4: How valuable are the upscale opportunities

Ranking by PRODY level	Brazil	China	Germany	India	Portugal	USA	Spain	Rep. of Korea	Russia	Turkey	Madagascar
VL	0	0	0	0	0	0	0	0	0	0	1
L	0	0	0	5	0	0	0	0	0	3	0
A	14	17	0	32	30	0	12	0	0	32	0
H	34	93	26	76	65	55	72	46	0	55	0
VH	16	102	69	62	29	74	96	36	0	22	0
Total	**64**	**212**	**95**	**175**	**124**	**129**	**180**	**82**	**0**	**112**	**1**

Source: Author's calculations. Note: the PRODY levels correspond to the five quintiles in the PRODY index for all the products in the sample. The five levels are: Very Low (VL, bottom 20%), Low (L, 20%-40%); Average (A, 40%-60%); High (H, 60%-80%) and Very High (VH, top 20%).

Regarding China, the country has upscale opportunities in three categories: average, high and very high, being the last one the category with the most products. As for India, the country has opportunities in four of the five classes. Like expected, the more developed countries, like USA and Germany, have upscale opportunities only in the two higher classes. One curious case is Madagascar. The only upscale opportunity is on the range of the lowest PRODY level products. This happens because the average sophistication level of the country's export basket is very low, so even the not so high "income content" goods can elevate the average sophistication level of the country's exports. Russia does not have any upscale opportunities that fit to our analysis; there are no products higher than our IDA in any PRODY level category. Now we focus on the sectors in which the upscale opportunities are inserted. Remember that we are only considering the upscale products higher than our benchmark measure IDA. In Table 5 we have these results. China has more upscale opportunities in "Machinery", 68

products, followed by "Chemicals, plastics, rubbers" with 54 products. India is the opposite, has more opportunities in "Chemicals, plastics, rubbers", 42 products, and in second place "Machinery" with 36 products.

Table 5: Upscale opportunities by product category

Category	Chapter of HS	Brazil	China	Germany	India	Madagascar	Portugal	Korea	Russia	Spain	Turkey	USA
Agricultural products and food	00-24	1	6	6	2	0	4	0	0	4	6	4
Mineral products and oils	25-27	0	0	2	0	0	0	0	0	0	1	2
Chemicals, plastics, rubbers	28-40	15	54	33	42	0	16	17	0	38	16	21
Wood, wood products, paper	44-49	6	14	2	10	0	10	5	0	9	7	8
Hides, leather and textiles	41-43, 50-60, 63	5	7	2	17	0	7	4	0	8	9	4
Clothing and footwear	61-62,64-67	0	0	0	1	1	0	0	0	0	2	0
Stones, ceramic, glass	68-71	5	12	5	14	0	9	6	0	10	3	6
Metals	72-83	12	26	12	22	0	19	14	0	32	19	26
Machinery	84-85	12	68	14	36	0	43	28	0	51	36	45
Transportation	86-89	5	7	2	8	0	4	0	0	5	5	4
Miscellaneous	90-97	3	18	17	23	0	12	8	0	23	8	9
Total	**00-97**	**64**	**212**	**95**	**175**	**1**	**124**	**82**	**0**	**180**	**112**	**129**

Source: Author's calculations. See Appendix 5, in the Annex, for all the upscale product opportunities for China and India.

5. Conclusion

Our work tried to understand the international position of China and India in terms of international trade. To do so we estimated some indexes which provided us information on the relations between the products, and between the products and the overall productive experience of China and India. Also we calculated indexes that gave us the possibility to assess the level of sophistication of a singular country's export basket, and also the sophistication level at product level. First, we studied the specialization patterns of both countries, concluding that "Machinery" was the most exported sector in Chinese trade. In India we had two main export sectors: "Mineral products and oils" and "Stones, ceramic and glass". Second, we addressed how consistent those specialization patterns were compared to the other countries in our sample. We saw that China ranks 9th and India 26th, out of 93 countries, in terms of consistency of the specialization patterns.

In the second part of our work, we assessed the upscale opportunities which are the products that can give the country the possibility for a structural transformation. We saw that China ranks 1st and India 5th in upscale opportunities. In the range of the upscale opportunities, "Machinery" and "Chemicals, plastics, rubbers" were the sectors with the higher number of upscale products for both countries. Assessing how valuable, in terms of PRODY value, were these opportunities, China has opportunities in three categories: Average, High and Very High, with the later leading the upscale opportunities with 102 products. As for India, the country has opportunities in four categories: Low, Average, High and Very High, with the category High leading the number of upscale opportunities with 76 products. For example, USA had opportunities only in the two highest PRODY level categories. The results of our work suggest that both countries are making their structural transformation into two main sectors: "Machinery" and "Chemicals, plastics, rubbers". Our analysis points to the fact that the two countries are becoming specialized in higher "income content" goods, especially in the sectors already mentioned; abandoning the traditional sectors like "Footwear and Clothing", or Agricultural products, in which China and India have very few upscale opportunities to increase their average sophistication level of their export baskets.

Finally, we point out some directions for further research. The use of per capita GDP in the construction of the PRODY and EXPY indexes has been criticized due to its circularity, in the sense that high income countries tend to export high income goods. A possible solution would be to use the alternative measures proposed by Hidalgo (2009) that separate the income information from the product space network information leading to new ways to analyze export diversification. A second question is related to the use of the PROBIT estimation to assess the likelihood of a country developing

comparative advantage in one good given the current specialization pattern. There are also alternative measures, such as the conditional probability approach of Hausmann and Klinger (2006, 2007) and Hidalgo et al. (2007). It would be interesting to understand which approach is actually a better predictor of future specialization patterns. Finally, our benchmark measure of IDA could also be modified. One possibility would be to compare China and India with the largest economies in the world only, since they are both achieving the top of the ranking.

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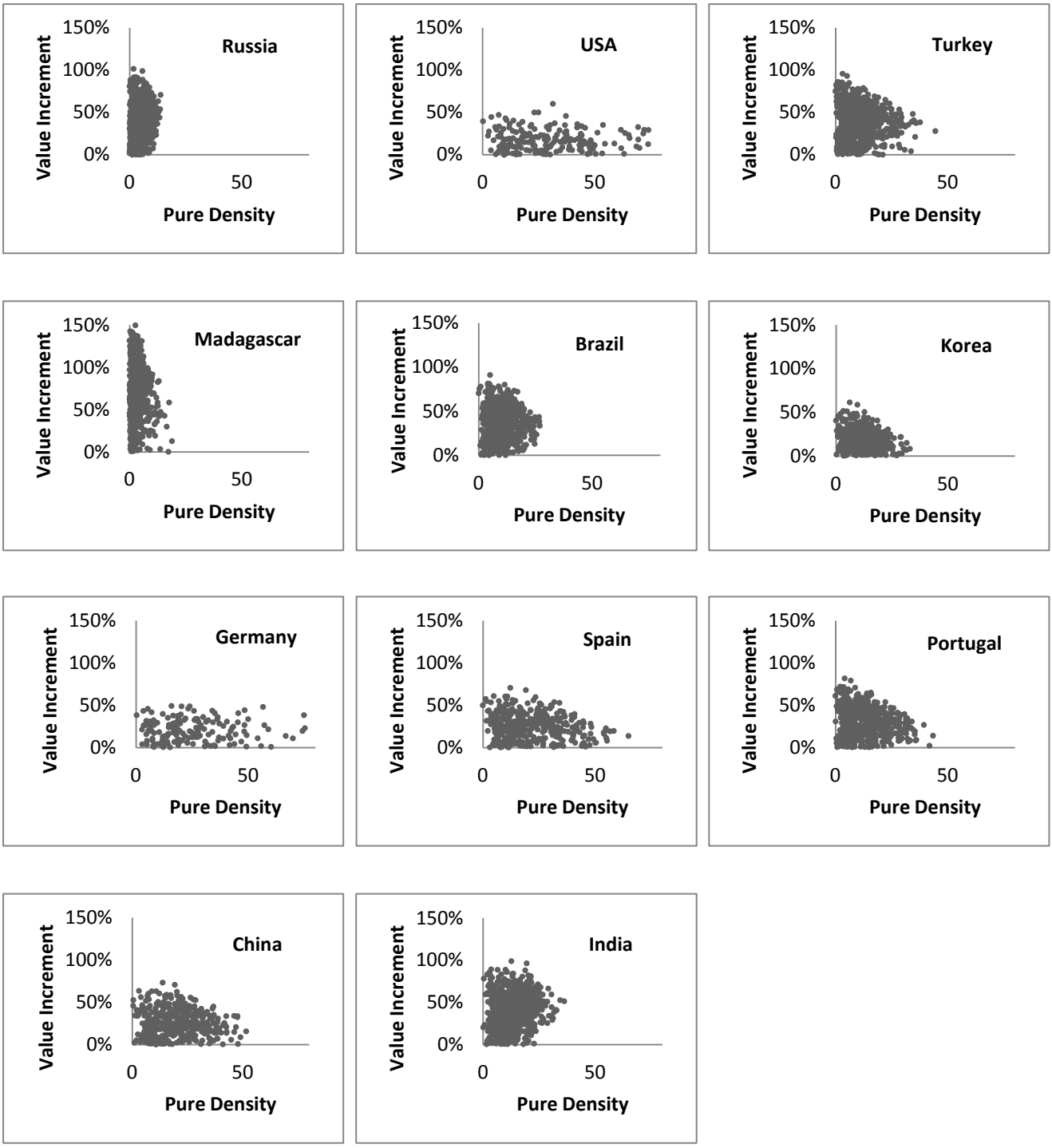
Appendix 1: Consistency and Upscale opportunities

Country	Export	Consistency	Upscale
Germany	40,59%	95,25%	95
Italy	40,03%	91,97%	176
Japan	25,00%	91,32%	118
Switzerland	27,17%	89,05%	64
France	38,59%	88,54%	169
Austria	29,74%	87,84%	135
Czech Rep.	31,43%	86,96%	167
Hong Kong SAR	23,31%	86,21%	55
China	40,27%	85,63%	212
USA	40,11%	85,37%	129
Spain	36,58%	83,74%	180
United	30,14%	83,20%	152
Slovenia	24,04%	81,94%	142
Sweden	21,70%	80,74%	123
Belgium	31,35%	77,18%	159
Netherlands	33,60%	77,03%	168
Poland	32,32%	76,37%	183
Slovakia	22,91%	75,44%	143
Denmark	23,71%	73,56%	139
Hungary	19,77%	72,36%	99
Rep. of Korea	16,72%	71,63%	82
Finland	18,09%	71,11%	97
Portugal	24,60%	70,92%	124
Thailand	26,21%	70,86%	136
Turkey	25,80%	66,98%	112
India	30,39%	65,61%	175
Romania	21,22%	64,02%	101
Croatia	21,30%	62,64%	114
Mexico	20,98%	59,77%	118
Latvia	20,26%	55,56%	91
Serbia	23,47%	54,79%	136
Bulgaria	22,59%	54,45%	95
Singapore	13,67%	54,12%	36
Greece	22,19%	53,99%	77
Lithuania	19,45%	52,07%	67
Canada	21,30%	49,43%	113
Belarus	15,59%	48,97%	72
Viet Nam	17,60%	47,49%	17
Tunisia	17,04%	44,34%	26
Bosnia	15,43%	39,58%	51
Malaysia	14,63%	39,01%	11
South Africa	21,14%	36,12%	53
Israel	12,14%	33,77%	34
Macedonia	14,71%	32,79%	17
Brazil	20,90%	32,69%	64
Pakistan	14,55%	30,39%	11

Country	Export	Consistency	Upscale
Sri Lanka	13,75%	29,82%	8
Morocco	14,07%	29,14%	1
Ireland	10,21%	28,35%	2
Albania	12,70%	26,58%	5
Jordan	15,35%	26,18%	11
New Zealand	17,28%	25,12%	26
Guatemala	16,16%	24,88%	6
Rep. of Moldova	12,86%	23,13%	5
Argentina	16,64%	22,22%	12
Colombia	15,43%	20,83%	10
Costa Rica	14,07%	18,86%	9
Madagascar	11,82%	14,97%	1
Australia	15,43%	11,98%	1
Honduras	13,59%	7,10%	1
Syria	10,93%	4,41%	0
Uruguay	13,02%	4,32%	0
Russia	9,65%	4,17%	0
Norway	7,80%	1,03%	0
Armenia	6,19%	0,00%	0
Azerbaijan	4,50%	0,00%	0
Benin	4,34%	0,00%	0
Bolivia	6,99%	0,00%	0
Cameroon	3,62%	0,00%	0
Chile	10,45%	0,00%	0
Cote d'Ivoire	7,56%	0,00%	0
Ecuador	6,75%	0,00%	0
Ghana	5,95%	0,00%	0
Iran	6,91%	0,00%	0
Jamaica	4,26%	0,00%	0
Kazakhstan	6,75%	0,00%	0
Kyrgyzstan	10,61%	0,00%	0
Malawi	5,31%	0,00%	0
Mongolia	5,23%	0,00%	0
Mozambique	4,66%	0,00%	0
Namibia	10,69%	0,00%	0
Nicaragua	8,20%	0,00%	0
Niger	3,46%	0,00%	0
Oman	3,78%	0,00%	0
Panama	5,87%	0,00%	0
Paraguay	8,04%	0,00%	0
Peru	12,70%	0,00%	0
Saudi Arabia	3,38%	0,00%	0
Senegal	11,01%	0,00%	0
Togo	6,67%	0,00%	0
Uganda	9,16%	0,00%	0
Tanzania	10,29%	0,00%	0
Zambia	6,19%	0,00%	0

Source: Author's calculations

Appendix 2 – The upscale opportunities for a sample of worldwide countries



Source: Author's calculations

STRUCTURAL TRANSFORMATION AND SPECIALIZATION PATTERNS IN THE PRODUCT SPACE – ASSESSING CHINA AND INDIA

ANNEX

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Master in Economics

4th June 2012

Appendix 3: China - The top 50 exported products

Code	Product	RCA	Pure Densities	Value Increments	Export shares
8501	Electric motors and generators (excluding generating sets).	1	86,09	0,08	0,45%
3926	Other articles of plastics and articles of other materials of headings 39.0 ...	1	86,02	0,13	0,79%
8481	Taps, cocks, valves and similar appliances for pipes, boiler shells	1	78,61	0,26	0,50%
8414	Air or vacuum pumps, air or other gas compressors and fans	1	74,94	0,19	0,51%
6403	Footwear with outer soles of rubber, plastics, leather or composition leath ...	1	69,77	-0,36	1,05%
9401	Seats (other than those of heading 94.02), whether or not convertible into ...	1	68,59	-0,10	0,74%
6204	Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts	1	68,49	-0,80	1,39%
8516	Electric instantaneous or storage water heaters and immersion heaters	1	68,42	0,06	0,96%
8544	Insulated (including enamelled or anodised) wire, cable	1	67,50	-0,36	0,64%
9405	Lamps and lighting fittings including searchlights and spotlights and parts ...	1	67,43	0,13	0,71%
5407	Woven fabrics of synthetic filament yarn	1	65,68	-0,32	0,62%
8467	Tools for working in the hand, pneumatic, hydraulic	1	61,44	0,27	0,44%
9506	Articles and equipment for general physical exercise, gymnastics, athletics ...	1	59,82	-0,02	0,52%
6203	Men's or boys' suits, ensembles, jackets, blazers, trousers	1	59,44	-0,83	0,85%
8507	Electric accumulators, including separators therefor	1	58,72	0,07	0,56%
9403	Other furniture and parts thereof.	1	55,83	-0,18	1,03%
4203	Articles of apparel and clothing accessories, of leather	1	54,90	-0,79	0,46%
8471	Automatic data processing machines and units thereof	1	54,89	0,23	10,03%
8528	Reception apparatus for television	1	54,73	-0,10	1,11%
8473	Parts and accessories for use with machines of heading 84.69 to 84.72	1	52,65	0,27	3,76%
8534	Printed circuits.	1	52,20	0,12	0,70%
8504	Electrical transformers, static converters (for example, rectifiers) and in ...	1	51,54	0,10	1,12%
8708	Parts and accessories of the motor vehicles of headings 87.01 to 87.05.	0	51,50	0,16	0,86%
4011	New pneumatic tyres, of rubber.	1	51,36	-0,15	0,50%
8541	Diodes, transistors and similar semiconductor devices	1	51,00	0,05	0,56%
4202	Trunks, suit-cases, vanity-cases, executive-cases, brief-cases	1	49,87	-0,21	0,96%
6109	T-shirts, singlets and other vests, knitted or crocheted.	1	49,40	-0,70	0,70%
8522	Parts and accessories for use with the apparatus of heading 85.19 to 85.21	1	48,89	0,28	0,59%
6104	Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts	1	47,54	-0,86	0,49%
6302	Bed linen, table linen, toilet linen and kitchen linen.	1	46,15	-0,96	0,50%
8521	Video recording or reproducing apparatus, whether or not incorporating a vi ...	1	45,53	0,07	1,01%
6110	Jerseys, pullovers, cardigans, waist-coats and similar articles, knitted or ...	1	45,32	-0,60	1,24%
9504	Articles for funfair, table or parlour games, including pintables, billiard ...	1	44,52	0,32	0,90%
8527	Reception apparatus for radio-telephony, radio-telegraphy or radio-broadcas ...	1	43,76	0,14	0,51%
8525	Transmission apparatus for radio-telephony, radio-broadcasting	1	43,65	0,31	4,07%
8415	Air conditioning machines, comprising a motor-driven fan	1	42,42	0,00	0,67%
8518	Microphones and stands therefor; loudspeakers	1	39,94	0,09	0,58%
8529	Parts suitable for use with the apparatus of headings 85.25 to 85.28	1	39,89	0,29	2,39%
8517	Electrical apparatus for line telephony or line telegraphy	1	39,43	0,31	1,24%
9013	Liquid crystal devices	1	38,93	0,21	1,51%
9009	Photocopying apparatus incorporating an optical system	1	38,28	0,38	0,53%
8536	Electrical apparatus for switching or protecting electrical circuits, or fo ...	0	38,18	0,14	0,50%
9503	Other toys; reduced-size (scale) models and similar recreational models	1	37,79	0,16	0,77%
8901	Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar ...	1	32,95	-0,01	0,52%
6402	Other footwear with outer soles and uppers of rubber or plastics.	1	31,72	-0,37	0,88%
8519	Turntables (record-decks), record-players, cassette-players	1	29,16	0,06	0,83%
8542	Electronic integrated circuits and microassemblies.	0	28,20	0,30	1,92%
8609	Containers (including containers for the transport of fluids)	1	17,82	-0,84	0,77%
2701	Coal; briquettes, ovoids and similar solid fuels manufactured from coal.	1	11,97	-0,03	0,56%
2710	Petroleum oils, other than crude	0	-5,08	-0,41	0,84%
	Total				**56,32%**

Source: Author's calculations

Appendix 4: India - The top 50 exported products

Code	Product	RCA	Pure densities	Increments	Export shares
6206	Women's or girls' blouses, shirts and shirt-blouses.	1	41,67	-0,57	1,28%
6403	Footwear with outer soles of rubber, plastics, leather or composition leath ...	1	41,05	-0,11	0,73%
5407	Woven fabrics of synthetic filament yarn	1	39,74	-0,06	0,56%
7323	Table, kitchen or other household articles and parts thereof, of iron or st ...	1	39,74	-0,09	0,43%
6204	Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts	1	39,64	-0,55	1,80%
3907	Polyacetals, other polyethers and epoxide resins, in primary forms	1	39,39	0,39	0,39%
3204	Synthetic organic colouring matter	1	36,51	0,47	0,64%
3808	Insecticides, rodenticides, fungicides, herbicides	1	36,36	0,10	0,62%
4203	Articles of apparel and clothing accessories, of leather	1	35,29	-0,53	0,52%
6205	Men's or boys' shirts.	1	34,43	-0,68	0,77%
4011	New pneumatic tyres, of rubber.	1	33,56	0,10	0,52%
6203	Men's or boys' suits, ensembles, jackets, blazers, trousers	1	33,12	-0,58	0,57%
6109	T-shirts, singlets and other vests, knitted or crocheted.	1	33,01	-0,44	1,15%
4202	Trunks, suit-cases, vanity-cases, executive-cases, brief-cases	1	32,51	0,05	0,54%
7325	Other cast articles of iron or steel.	1	29,61	0,11	0,36%
6307	Other made up articles, including dress patterns.	1	29,40	-0,34	0,58%
5007	Woven fabrics of silk or of silk waste.	1	28,05	-0,04	0,37%
8703	Motor cars and other motor vehicles principally designed for the transport ...	0	27,08	0,51	0,92%
5208	Woven fabrics of cotton, containing 85 % or more by weight of cotton	1	26,75	-0,59	0,45%
9701	Paintings, drawings and pastels, executed entirely by hand	1	26,36	0,68	0,42%
8708	Parts and accessories of the motor vehicles of headings 87.01 to 87.05.	0	26,28	0,41	1,10%
7102	Diamonds, whether or not worked, but not mounted or set.	1	22,16	0,11	11,39%
6802	Worked monumental or building stone (except slate) and articles thereof	1	21,77	-0,06	0,54%
7210	Flat-rolled products of iron or non-alloy steel	1	21,71	-0,07	1,25%
3004	Medicaments (excluding goods of heading 30.02, 30.05 or 30.06)	0	21,56	0,64	2,06%
6105	Men's or boys' shirts, knitted or crocheted.	1	21,14	-1,00	0,42%
6304	Other furnishing articles, excluding those of heading 94.04.	1	19,96	-0,65	1,15%
7208	Flat-rolled products of iron or non-alloy steel	1	19,78	-0,08	0,62%
5205	Cotton yarn (other than sewing thread), containing 85 % or more by weight o ...	1	18,25	-0,78	1,00%
7305	Other tubes and pipes (for example, welded, riveted or similarly closed)	1	17,90	0,26	0,49%
7408	Copper wire.	1	17,87	-0,39	0,41%
2902	Cyclic hydrocarbons.	1	17,05	0,33	0,80%
8409	Parts suitable for use solely or principally with the engines of heading 84 ...	0	16,52	0,23	0,39%
7113	Articles of jewellery and parts thereof, of precious metal	1	15,89	-0,07	3,35%
2516	Granite, porphyry, basalt, sandstone and other stone	1	14,08	-0,34	0,39%
1006	Rice.	1	13,44	-0,85	1,38%
5702	Carpets and other textile floor coverings, woven, not tufted or flocked	1	13,37	-0,39	0,45%
2304	Oil-cake and other solid residues	1	10,23	-0,48	0,95%
902	Tea, whether or not flavoured.	1	9,83	-1,54	0,36%
801	Coconuts, Brazil nuts and cashew nuts, fresh or dried	1	9,14	-1,82	0,57%
2601	Iron ores and concentrates	1	8,92	0,10	3,73%
5207	Cotton yarn (other than sewing thread) put up for retail sale.	1	8,65	-0,77	0,42%
8905	Light-vessels, fire-floats, dredgers, floating cranes and other vessels	1	8,31	-0,62	0,51%
306	Crustaceans, whether in shell or not	1	8,17	-1,05	0,88%
7403	Refined copper and copper alloys, unwrought.	1	7,88	-0,66	0,71%
2818	Artificial corundum, whether or not chemically defined;	1	6,64	-0,75	0,41%
5201	Cotton, not carded or combed.	1	5,64	-1,67	0,62%
202	Meat of bovine animals, frozen.	1	3,22	-0,21	0,57%
2710	Petroleum oils, other than crude	1	1,09	-0,15	11,17%
2942	Other organic compounds.	1	0,80	-1,04	1,65%
	Total				**63,36%**

Source: Author's calculations

Appendix 5

The 212 upscale products for China higher than the IDA

Product	Code	Pure Densities	Increments	Export shares
Parts and accessories of the motor vehicles of headings 87.01 to 87.05.	8708	51,50	0,16	0,86%
Tubes, pipes and hoses, of vulcanised rubber other than hard rubber	4009	48,94	0,09	0,01%
Other articles of vulcanised rubber other than hard rubber.	4016	47,77	0,01	0,08%
Revolution counters, production counters, taximeters, mileometers	9029	47,58	0,33	0,02%
Prepared rubber accelerators	3812	47,54	0,32	0,02%
Gaskets and similar joints of metal sheeting combined with other material	8484	46,90	0,21	0,02%
Electrical lighting or signalling equipment	8512	46,10	0,15	0,05%
Synthetic monofilament of 67 decitex or more	5404	46,07	0,34	0,00%
Electrical insulators of any material.	8546	44,72	0,06	0,01%
Other plates, sheets, film, foil and strip, of plastics	3921	42,72	0,15	0,06%
Metal-rolling mills and rolls therefor.	8455	42,61	0,14	0,02%
Bobbins, spools, cops and similar supports of paper pulp, paper or paperboa ...	4822	42,50	0,21	0,00%
Electrical machines and apparatus, having individual functions	8543	42,48	0,33	0,21%
Parts suitable for use principally with the machines of heading 85.01 or 85 ...	8503	42,24	0,22	0,09%
Motor cars and other motor vehicles principally designed for the transport ...	8703	41,66	0,25	0,11%
Transmission shafts (including cam shafts and crank shafts) and cranks	8483	41,01	0,23	0,15%
Plates, sheets, strip, rods and profile shapes, of vulcanised rubber	4008	40,95	0,00	0,01%
Central heating boilers other than those of heading 84.02.	8403	40,16	0,14	0,00%
Moulding boxes for metal foundry; mould bases; moulding patterns	8480	39,36	0,19	0,09%
Machinery, plant or laboratory equipment	8419	38,73	0,31	0,06%
Springs and leaves for springs, of iron or steel.	7320	38,59	0,07	0,01%
Rubberised textile fabrics, other than those of heading 59.02.	5906	38,53	0,27	0,01%
Electrical ignition or starting equipment	8511	38,30	0,07	0,05%
Newspapers, journals and periodicals	4902	38,18	0,18	0,00%
Electrical apparatus for switching or protecting electrical circuits, or fo ...	8536	38,18	0,14	0,50%
Industrial or laboratory furnaces and ovens, including incinerators, non-el ...	8417	38,18	0,26	0,02%
Other printed matter, including printed pictures and photographs.	4911	37,96	0,22	0,02%
Polyacetals, other polyethers and epoxide resins, in primary forms	3907	37,49	0,14	0,20%
Flat-rolled products of stainless steel, of a width of less than 600 mm.	7220	36,88	0,35	0,01%
Other bars and rods of other alloy steel;	7228	36,84	0,14	0,07%
Parts of railway or tramway locomotives or rolling-stock.	8607	36,79	0,16	0,03%
Knitted or crocheted fabrics of a width not exceeding 30 cm	6003	36,78	0,04	0,00%
Optical fibres and optical fibre bundles	9001	36,68	0,45	0,12%
Parts and accessories for use with machines of heading 84.56 to 84.65	8466	36,61	0,25	0,06%
Bars and rods, hot-rolled, in irregularly wound coils, of other alloy steel ...	7227	36,29	0,42	0,01%
Other lifting, handling, loading or unloading machinery	8428	36,18	0,31	0,09%
Slag wool, rock wool and similar mineral wools	6806	35,77	0,16	0,01%
Aluminium foil (whether or not printed or backed with paper, paperboard or ...	7607	35,51	0,16	0,06%
Printed books, brochures, leaflets and similar printed matter	4901	35,46	0,16	0,07%
Electric (including electrically heated gas), laser or other light	8515	35,21	0,34	0,04%
Machine-tools for planing, shaping, slotting, broaching, gear cutting, gear ...	8461	35,17	0,30	0,01%
Radiators for central heating, not electrically heated, and parts thereof	7322	35,14	0,07	0,01%
Parts suitable for use with the apparatus of heading 85.35, 85.36 or 85.37	8538	34,93	0,01	0,11%
Pre-shave, shaving or after-shave preparations	3307	34,79	0,08	0,04%
Harvesting or threshing machinery, including straw or fodder balers	8433	34,75	0,22	0,04%
Other plates, sheets, film, foil and strip, of plastics	3920	33,97	0,15	0,14%
Copper springs.	7416	33,97	0,36	0,00%
Felt, whether or not impregnated, coated, covered or laminated.	5602	33,94	0,26	0,00%
Parts suitable for use principally with the machinery of headings 84.25 to ...	8431	33,85	0,13	0,19%
Industrial or laboratory electric furnaces and ovens	8514	33,82	0,39	0,01%
Pickling preparations for metal surfaces	3810	33,75	0,37	0,00%
Insulating fittings for electrical machines, appliances or equipment	8547	33,66	0,22	0,03%
Conveyor or transmission belts or belting, of vulcanised rubber.	4010	33,56	0,14	0,02%
Lathes (including turning centres) for removing metal.	8458	33,03	0,25	0,02%
Steam or other vapour generating boilers	8402	32,82	0,15	0,02%
Interchangeable tools for hand tools, whether or not power-operated	8207	32,73	0,13	0,06%
Nonwovens, whether or not impregnated, coated, covered or laminated.	5603	32,70	0,24	0,05%
Laboratory, hygienic or pharmaceutical glassware	7017	32,66	0,22	0,00%
Machinery, not specified or included elsewhere in this Chapter	8438	32,07	0,33	0,02%
Machinery (other than machines of heading 84.50) for washing, cleaning, wri ...	8451	31,92	0,24	0,03%
Instruments and apparatus for measuring or checking the flow, level, pressu ...	9026	31,74	0,31	0,04%
Time switches with clock or watch movement or with synchronous motor.	9107	31,66	0,05	0,01%
Safety glass, consisting of toughened (tempered) or laminated glass.	7007	31,62	0,16	0,05%
Other bars and rods of stainless steel;	7222	31,54	0,20	0,01%
Medical, surgical, dental or veterinary furniture	9402	31,54	0,25	0,01%
Finishing agents, dye carriers to accelerate the dyeing	3809	31,51	0,25	0,01%
Centrifuges, including centrifugal dryers	8421	31,44	0,15	0,08%
Transfers (decalcomanias).	4908	31,26	0,39	0,00%
Polyamides in primary forms.	3908	31,23	0,37	0,02%

Product	Code	Pure Densities	Increments	Export shares
Printing machinery used for printing by means of the printing type, blocks	8443	31,22	0,42	0,04%
Acetals and hemiacetals	2911	31,09	0,39	0,00%
Prefabricated buildings.	9406	31,06	0,00	0,04%
Lubricating preparations	3403	30,87	0,41	0,00%
Phenols; phenol-alcohols.	2907	30,77	0,35	0,02%
Pumps for liquids, whether or not fitted with a measuring device; liquid el ...	8413	30,53	0,21	0,18%
Other machinery for making up paper pulp, paper or paperboard	8441	30,39	0,39	0,02%
Other clock or watch parts.	9114	29,61	0,34	0,01%
Wire of stainless steel.	7223	29,23	0,18	0,01%
Machine-tools (including machines for nailing, stapling, glueing	8465	29,23	0,26	0,05%
Medicaments (excluding goods of heading 30.02, 30.05 or 30.06)	3004	29,09	0,38	0,06%
Machines and mechanical appliances having individual functions	8479	28,95	0,35	0,12%
Steam turbines and other vapour turbines.	8406	28,93	0,04	0,02%
Other colouring matter	3206	28,92	0,33	0,05%
Polymers of styrene, in primary forms.	3903	28,92	0,20	0,02%
Silicones in primary forms.	3910	28,90	0,40	0,01%
Paper, paperboard, cellulose wadding and webs of cellulose fibres	4811	28,66	0,22	0,02%
Nickel tubes, pipes and tube or pipe fittings (for example, couplings, elbo ...	7507	28,62	0,52	0,00%
Nickel plates, sheets, strip and foil.	7506	28,57	0,11	0,00%
Electronic integrated circuits and microassemblies.	8542	28,20	0,30	1,92%
Boards, panels, consoles, desks, cabinets and other bases	8537	28,18	0,06	0,08%
Keyboard pipe organs; harmoniums and similar keyboard instruments with free ...	9203	28,12	0,45	0,00%
Filter blocks, slabs and plates, of paper pulp.	4812	28,11	0,22	0,00%
Ceramic wares for laboratory, chemical or other technical uses	6909	28,09	0,24	0,01%
Acrylic polymers in primary forms.	3906	28,06	0,37	0,02%
Apparatus based on the use of X-rays or of alpha, beta or gamma radiations	9022	27,91	0,44	0,05%
Agricultural, horticultural or forestry machinery for soil preparation or c ...	8432	27,90	0,08	0,01%
Printing ink, writing or drawing ink	3215	27,87	0,36	0,02%
Natural or artificial abrasive powder or grain, on a base of textile materi ...	6805	27,81	0,29	0,01%
Glaziers' putty, grafting putty, resin cements	3214	27,80	0,08	0,01%
Compression-ignition internal combustion piston engines (diesel or semi-die ...	8408	27,73	0,22	0,03%
Pig fat (including lard) and poultry fat	1501	27,71	0,31	0,00%
Particle board and similar board	4410	27,68	0,11	0,00%
Instruments and apparatus for physical or chemical analysis	9027	27,66	0,53	0,06%
Prepared pigments, prepared opacifiers and prepared colours	3207	27,65	0,22	0,01%
Multiple-walled insulating units of glass.	7008	27,55	0,17	0,00%
Furnace burners for liquid fuel, for pulverised solid fuel or for gas	8416	27,34	0,17	0,01%
Tractors (other than tractors of heading 87.09).	8701	27,23	0,08	0,04%
Carbon paper, self-copy paper and other copying or transfer papers	4816	27,22	0,25	0,00%
Measuring or checking instruments, appliances and machines	9031	26,94	0,35	0,05%
Presses, crushers and similar machinery used in the manufacture of wine	8435	26,85	0,19	0,00%
Vegetable alkaloids, natural or reproduced by synthesis	2939	26,60	0,27	0,01%
Fork-lift trucks; other works trucks fitted with lifting or handling equipm ...	8427	26,47	0,43	0,04%
Glass in balls (other than microspheres of heading 70.18), rods or tubes, u ...	7002	26,45	0,34	0,01%
Human blood; animal blood prepared for therapeutic uses	3002	26,32	0,55	0,00%
Other engines and motors.	8412	26,32	0,21	0,03%
Millstones, grindstones, grinding wheels and the like	6804	26,26	0,24	0,02%
Prepared binders for foundry moulds or cores	3824	25,88	0,46	0,10%
Refractory cements, mortars, concretes and similar compositions	3816	25,79	0,03	0,01%
Typewriter or similar ribbons, inked or otherwise prepared for giving impre ...	9612	25,78	0,13	0,01%
Other agricultural, horticultural, forestry, poultry-keeping or bee-keeping ...	8436	25,57	0,40	0,01%
Automatic regulating or controlling instruments and apparatus.	9032	25,54	0,23	0,06%
Electrical signalling, safety or traffic control equipment for railways	8530	25,54	0,25	0,00%
Textile products and articles, for technical uses	5911	25,30	0,21	0,01%
Modelling pastes	3407	25,29	0,37	0,00%
Aluminium tube or pipe fittings (for example, couplings, elbows, sleeves).	7609	25,14	0,08	0,00%
Machinery for making pulp of fibrous cellulosic material	8439	25,08	0,45	0,01%
Automatic goods-vending machines	8476	25,02	0,44	0,01%
Records, tapes and other recorded media for sound	8524	24,89	0,45	0,02%
Flat-rolled products of stainless steel, of a width of 600 mm or more.	7219	24,76	0,36	0,06%
Ball or roller bearings.	8482	24,73	0,11	0,18%
Other salts of inorganic acids or peroxoacids	2842	24,65	0,37	0,00%
Auxiliary machinery for use with machines of heading 84.44, 84.45, 84.46 or ...	8448	24,55	0,33	0,02%
Yachts and other vessels for pleasure or sports; rowing boats and canoes.	8903	24,46	0,34	0,01%
Quaternary ammonium salts and hydroxides	2923	24,44	0,29	0,01%
Other refractory ceramic goods	6903	24,37	0,18	0,01%
Machines for assembling electric or electronic lamps, tubes or valves	8475	24,35	0,27	0,01%
Machinery for working rubber or plastics	8477	24,33	0,28	0,10%
Other uncoated paper and paperboard, in rolls or sheets	4805	24,08	0,06	0,00%
Carbon paper, self-copy paper and other copying or transfer papers	4809	24,01	0,29	0,01%
Base metals clad with silver	7107	23,94	0,49	0,00%
Weaving machines (looms).	8446	23,88	0,36	0,00%
Preparations and charges for fire-extinguishers	3813	23,80	0,32	0,00%
Prepared glues and other prepared adhesives	3506	23,77	0,19	0,03%
Other alloy steel in ingots or other primary forms;	7224	23,62	0,05	0,00%
Bars and rods, hot-rolled, in irregularly wound coils, of stainless steel.	7221	23,50	0,39	0,00%

Product	Code	Pure Densities	Increments	Export shares
Microscopes other than optical microscopes; diffraction apparatus.	9012	23,50	0,42	0,00%
Other inorganic compounds	2851	23,43	0,25	0,00%
Machinery, apparatus and equipment	8442	23,35	0,47	0,00%
Plates, sticks, tips and the like for tools, unmounted, of cermets.	8209	23,17	0,47	0,01%
Articles of stone or of other mineral substances	6815	23,11	0,22	0,01%
Saturated acyclic monocarboxylic acids and their anhydrides	2915	23,09	0,08	0,03%
Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes ...	3919	22,93	0,28	0,06%
Amino-resins, phenolic resins and polyurethanes, in primary forms.	3909	22,91	0,22	0,02%
Machines and appliances for testing the hardness, strength, compressibility ...	9024	22,85	0,49	0,00%
Photographic plates and film in the flat, sensitised, unexposed	3701	22,81	0,31	0,02%
Pigments dispersed in non-aqueous media	3212	22,79	0,24	0,00%
Prepared culture media for development of micro-organisms.	3821	22,78	0,54	0,00%
Machining centres, unit construction machines (single station)	8457	22,63	0,37	0,00%
Machines for extruding, drawing, texturing or cutting man-made textile mate ...	8444	22,58	0,42	0,00%
Electrical apparatus for switching or protecting electrical circuits	8535	22,55	0,05	0,01%
Paints and varnishes	3209	22,53	0,03	0,00%
Roundabouts, swings, shooting galleries and other fairground amusements	9508	22,42	0,13	0,00%
Machinery parts, not containing electrical connectors, insulators, coils	8485	22,24	0,42	0,02%
Radar apparatus, radio navigational aid apparatus and radio remote control ...	8526	22,23	0,30	0,08%
Turbo-jets, turbo-propellers and other gas turbines.	8411	22,22	0,42	0,04%
Paints and varnishes	3208	22,19	0,04	0,03%
Music, printed or in manuscript, whether or not bound or illustrated.	4904	22,10	0,56	0,00%
Pharmaceutical goods specified in Note 4 to this Chapter.	3006	22,01	0,49	0,01%
Railway or tramway track fixtures and fittings; mechanical	8608	21,93	0,28	0,00%
Waste and scrap of primary cells, primary batteries and electric accumulato ...	8548	21,86	0,12	0,01%
Other oils and their fractions, obtained solely from olives	1510	21,67	0,18	0,00%
Nickel waste and scrap.	7503	21,66	0,05	0,00%
Machines for preparing textile fibres; spinning, doubling or twisting machi ...	8445	21,62	0,30	0,02%
Aluminium reservoirs, tanks, vats and similar containers, for any material	7611	21,36	0,04	0,00%
Self-propelled railway or tramway coaches, vans and trucks	8603	21,33	0,49	0,01%
Postage or revenue stamps, stamp-postmarks, first-day covers, postal statio ...	9704	21,27	0,24	0,00%
Amine-function compounds	2921	21,20	0,55	0,08%
Reaction initiators, reaction accelerators and catalytic preparations	3815	21,19	0,40	0,02%
Flat-rolled products of other alloy steel, of a width of less than 600 mm.	7226	21,19	0,28	0,01%
Titanium and articles thereof, including waste and scrap.	8108	21,18	0,15	0,01%
Aluminium powders and flakes.	7603	21,13	0,31	0,00%
Nickel bars, rods, profiles and wire.	7505	20,91	0,51	0,00%
Worked mica and articles of mica, including agglomerated	6814	20,58	0,22	0,00%
Dish washing machines; machinery for cleaning or drying bottles or other co ...	8422	20,54	0,32	0,05%
Antiques of an age exceeding one hundred years.	9706	20,34	0,58	0,00%
Meat of swine, fresh, chilled or frozen.	203	20,30	0,38	0,05%
Artificial filament tow.	5502	20,28	0,45	0,00%
Machinery for preparing, tanning or working hides, skins or leather	8453	20,19	0,02	0,00%
Hormones, prostaglandins, thromboxanes and leukotrienes	2937	20,17	0,62	0,03%
Artificial waxes and prepared waxes	3404	20,17	0,32	0,00%
Petroleum resins, coumarone-indene resins, polyterpenes	3911	20,04	0,26	0,01%
Organic derivatives of hydrazine or of hydroxylamine.	2928	19,63	0,41	0,00%
Paper and paperboard, coated on one or both sides with kaolin	4810	19,62	0,45	0,09%
Hydraulic turbines, water wheels, and regulators therefor.	8410	19,46	0,19	0,01%
Railway or tramway track construction material of iron or steel	7302	19,42	0,14	0,01%
Chemical wood pulp, sulphite, other than dissolving grades.	4704	19,35	0,32	0,00%
Machine-tools (including presses) for working metal by forging, hammering	8462	19,34	0,18	0,02%
Tin foil (whether or not printed or backed with paper, paperboard or plasti ...	8005	19,25	0,36	0,00%
Photographic paper, paperboard and textiles, sensitised, unexposed.	3703	19,23	0,37	0,02%
Other organo-inorganic compounds.	2931	19,22	0,71	0,02%
Chemical preparations for photographic uses	3707	19,16	0,48	0,01%
Machines for cleaning, sorting or grading seed, grain or dried leguminous v ...	8437	19,10	0,11	0,01%
Polymers of vinyl acetate or of other vinyl esters, in primary forms	3905	19,03	0,23	0,01%
Birds' eggs, not in shell, and egg yolks	408	19,02	0,23	0,00%
Book-binding machinery, including book-sewing machines.	8440	18,93	0,37	0,00%
Pig fat, free of lean meat, and poultry fat	209	18,64	0,36	0,00%
Other machine-tools for working metal or cermets, without removing material ...	8463	18,61	0,25	0,00%
Flat-rolled products of other alloy steel, of a width of 600 mm or more.	7225	18,52	0,38	0,01%
Nitrile-function compounds.	2926	18,50	0,10	0,02%
Other meat and edible meat offal, fresh, chilled or frozen.	208	18,34	0,16	0,00%
Prepared driers.	3211	18,08	0,01	0,00%
Machine-tools for working stone, ceramics, concrete, asbestos-cement	8464	17,97	0,34	0,02%
Total				**9,04%**

Source: Author's calculations

The 175 upscale products for India higher than the IDA

Product	Code	Pure densities	Increments	Export shares
Taps, cocks, valves and similar appliances for pipes, boiler shells	8481	36,21	0,51	0,32%
Unsaturated acyclic monocarboxylic acids	2916	34,39	0,53	0,03%
Other plates, sheets, film, foil and strip, of plastics	3921	32,82	0,41	0,03%
Other plates, sheets, film, foil and strip, of plastics	3920	32,54	0,41	0,29%
Other articles of plastics and articles of other materials of headings 39.0 ...	3926	31,65	0,38	0,15%
Other articles of iron or steel.	7326	31,20	0,31	0,21%
Narrow woven fabrics, other than goods of heading 58.07	5806	30,92	0,29	0,01%
Air or vacuum pumps, air or other gas compressors and fans	8414	30,59	0,44	0,19%
Synthetic monofilament of 67 decitex or more	5404	30,50	0,59	0,01%
Electric motors and generators (excluding generating sets).	8501	30,43	0,34	0,13%
Warp knit fabrics (including those made on galloon knitting machines)	6005	29,40	0,34	0,01%
Lubricating preparations	3403	29,10	0,66	0,01%
Compounded rubber, unvulcanised, in primary forms or in plates, sheets or s ...	4005	28,70	0,25	0,01%
Ketones and quinones	2914	28,66	0,51	0,05%
Electric generating sets and rotary converters.	8502	27,80	0,46	0,06%
Motor cars and other motor vehicles principally designed for the transport ...	8703	27,08	0,51	0,92%
Cotton yarn (other than sewing thread), containing less than 85 % by weight ...	5206	26,88	0,30	0,01%
Glassware of a kind used for table, kitchen, toilet, office	7013	26,72	0,29	0,01%
Revolution counters, production counters, taximeters, mileometers	9029	26,60	0,59	0,00%
Refractory bricks, blocks, tiles and similar refractory ceramic constructio ...	6902	26,30	0,25	0,03%
Parts and accessories of the motor vehicles of headings 87.01 to 87.05.	8708	26,28	0,41	1,10%
Bells, gongs and the like, non-electric, of base metal; statuettes and othe ...	8306	26,02	0,33	0,00%
Bobbins, spools, cops and similar supports of paper pulp, paper or paperboa ...	4822	25,96	0,46	0,00%
Textile fabrics impregnated, coated, covered or laminated with plastics	5903	25,68	0,47	0,03%
Printing machinery used for printing by means of the printing type, blocks	8443	25,64	0,68	0,07%
Other articles of vulcanised rubber other than hard rubber.	4016	25,61	0,26	0,10%
Hydrometers and similar floating instruments, thermometers, pyrometers, bar ...	9025	25,55	0,51	0,00%
Paper, paperboard, cellulose wadding and webs of cellulose fibres	4811	25,45	0,47	0,02%
Parts (for example, mechanisms for musical boxes) and accessories	9209	25,44	0,53	0,01%
Glass mirrors, whether or not framed, including rear-view mirrors.	7009	25,40	0,45	0,01%
Other printed matter, including printed pictures and photographs.	4911	25,25	0,48	0,01%
Nonwovens, whether or not impregnated, coated, covered or laminated.	5603	25,19	0,50	0,00%
Drawing, marking-out or mathematical calculating instruments	9017	25,08	0,51	0,01%
Acrylic polymers in primary forms.	3906	24,96	0,62	0,01%
Tools for working in the hand, pneumatic, hydraulic	8467	24,96	0,53	0,02%
Newspapers, journals and periodicals	4902	24,90	0,44	0,00%
Compression-ignition internal combustion piston engines (diesel or semi-die ...	8408	24,71	0,48	0,11%
Bars and rods, hot-rolled, in irregularly wound coils, of other alloy steel ...	7227	24,54	0,68	0,01%
Prepared binders for foundry moulds or cores	3824	24,50	0,71	0,05%
Transmission shafts (including cam shafts and crank shafts) and cranks	8483	24,43	0,48	0,15%
Copper tube or pipe fittings (for example, couplings, elbows, sleeves).	7412	24,42	0,56	0,01%
Knives and cutting blades, for machines or for mechanical appliances.	8208	24,34	0,55	0,01%
Electrical lighting or signalling equipment	8512	24,24	0,40	0,03%
Sanitary ware and parts thereof, of iron or steel.	7324	24,20	0,37	0,02%
Carriages for disabled persons	8713	24,08	0,60	0,00%
Machinery, not specified or included elsewhere in this Chapter	8438	24,00	0,58	0,04%
Machinery, plant or laboratory equipment	8419	23,99	0,56	0,18%
Textile products and articles, for technical uses	5911	23,79	0,47	0,01%
Felt, whether or not impregnated, coated, covered or laminated.	5602	23,59	0,52	0,00%
Seats (other than those of heading 94.02), whether or not convertible into ...	9401	23,55	0,16	0,00%
Aluminium foil (whether or not printed or backed with paper, paperboard or ...	7607	23,43	0,41	0,06%
Fork-lift trucks; other works trucks fitted with lifting or handling equipm ...	8427	23,42	0,68	0,00%
Other colouring matter	3206	23,37	0,59	0,03%
Base metal mountings, fittings and similar articles suitable for furniture	8302	23,27	0,41	0,11%
Interchangeable tools for hand tools, whether or not power-operated	8207	23,18	0,38	0,06%
Tractors (other than tractors of heading 87.09).	8701	23,04	0,34	0,22%
Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes ...	3919	23,03	0,54	0,04%
Granules and powders, of pig iron, spiegeleisen, iron or steel.	7205	22,99	0,24	0,01%
Tubes, pipes and hoses, of vulcanised rubber other than hard rubber	4009	22,94	0,34	0,03%
Carbon paper, self-copy paper and other copying or transfer papers	4816	22,92	0,51	0,00%
Motor vehicles for the transport of goods.	8704	22,89	0,20	0,19%
Padlocks and locks (key, combination or electrically operated), of base met ...	8301	22,75	0,01	0,01%
Other machinery for making up paper pulp, paper or paperboard	8441	22,75	0,64	0,01%
Industrial or laboratory electric furnaces and ovens	8514	22,74	0,64	0,02%
Laboratory, hygienic or pharmaceutical glassware	7017	22,59	0,48	0,01%
Sugars, chemically pure, other than sucrose, lactose	2940	22,58	0,67	0,00%
Lathes (including turning centres) for removing metal.	8458	22,56	0,51	0,01%
Woven fabrics of artificial staple fibres.	5516	22,53	0,16	0,02%
Slag wool, rock wool and similar mineral wools	6806	22,50	0,42	0,00%
Organic surface-active agents (other than soap)	3402	22,39	0,19	0,04%
Pre-shave, shaving or after-shave preparations	3307	22,33	0,33	0,06%
Finishing agents, dye carriers to accelerate the dyeing	3809	22,04	0,50	0,02%
Prepared glues and other prepared adhesives	3506	21,92	0,45	0,02%

Product	Code	Pure Densities	Increments	Export shares
Polymers of vinyl chloride or of other halogenated olefins, in primary form ...	3904	21,88	0,24	0,03%
Trailers and semi-trailers	8716	21,84	0,36	0,01%
Photographic plates and film in the flat, sensitised, unexposed	3701	21,79	0,57	0,00%
Glass in balls (other than microspheres of heading 70.18), rods or tubes, u ...	7002	21,78	0,60	0,00%
Industrial or laboratory furnaces and ovens, including incinerators, non-el ...	8417	21,69	0,52	0,03%
Transfers (decalcomanias).	4908	21,63	0,65	0,00%
Reaction initiators, reaction accelerators and catalytic preparations	3815	21,63	0,65	0,04%
Carboxylic acids with additional oxygen function	2918	21,62	0,73	0,04%
Central heating boilers other than those of heading 84.02.	8403	21,61	0,40	0,01%
Woven fabrics of flax.	5309	21,60	0,28	0,00%
Lamps and lighting fittings including searchlights and spotlights and parts ...	9405	21,60	0,38	0,02%
Harvesting or threshing machinery, including straw or fodder balers	8433	21,57	0,47	0,01%
Printed books, brochures, leaflets and similar printed matter	4901	21,56	0,42	0,10%
Medicaments (excluding goods of heading 30.02, 30.05 or 30.06)	3004	21,56	0,64	2,06%
Instruments and apparatus for measuring or checking the flow, level, pressu ...	9026	21,54	0,56	0,02%
Ceramic tableware, kitchenware, other household articles and toilet article ...	6912	21,45	0,11	0,00%
Preparations and charges for fire-extinguishers	3813	21,45	0,58	0,00%
Springs and leaves for springs, of iron or steel.	7320	21,43	0,33	0,04%
Baths, shower-baths, sinks, wash-basins, bidets, lavatory pans	3922	21,43	0,32	0,00%
Electric instantaneous or storage water heaters and immersion heaters	8516	21,40	0,31	0,04%
Other lifting, handling, loading or unloading machinery	8428	21,35	0,57	0,02%
Human blood; animal blood prepared for therapeutic uses	3002	21,28	0,81	0,09%
Prepared culture media for development of micro-organisms.	3821	21,25	0,80	0,00%
Musical instruments, the sound of which is produced, or must be amplified, ...	9207	21,21	0,52	0,00%
Tailors' dummies and other lay figures; automata and other animated display ...	9618	21,20	0,32	0,00%
Yachts and other vessels for pleasure or sports; rowing boats and canoes.	8903	21,11	0,60	0,00%
Aluminium reservoirs, tanks, vats and similar containers, for any material	7611	21,08	0,30	0,00%
Pumps for liquids, whether or not fitted with a measuring device; liquid el ...	8413	21,07	0,47	0,17%
Parts and accessories for use with machines of heading 84.56 to 84.65	8466	21,05	0,51	0,12%
Pharmaceutical goods specified in Note 4 to this Chapter.	3006	21,05	0,75	0,02%
Nickel tubes, pipes and tube or pipe fittings (for example, couplings, elbo ...	7507	21,01	0,78	0,00%
Other arms (for example, spring, air or gas guns and pistols, truncheons)	9304	20,95	0,44	0,00%
Medical, surgical, dental or veterinary furniture	9402	20,94	0,51	0,00%
Flat-rolled products of iron or non-alloy steel, of a width of less than 60 ...	7211	20,93	0,42	0,03%
Instruments and apparatus for physical or chemical analysis	9027	20,89	0,79	0,01%
Measuring or checking instruments, appliances and machines	9031	20,88	0,61	0,02%
Nickel plates, sheets, strip and foil.	7506	20,88	0,36	0,00%
Pickling preparations for metal surfaces	3810	20,82	0,62	0,00%
Electrical ignition or starting equipment	8511	20,78	0,33	0,10%
Gas, liquid or electricity supply or production meters	9028	20,74	0,29	0,01%
Platinum, unwrought or in semi-manufactured forms, or in powder form.	7110	20,68	0,18	0,01%
Pigments dispersed in non-aqueous media	3212	20,66	0,50	0,01%
Polyamides in primary forms.	3908	20,61	0,63	0,01%
Articles and equipment for general physical exercise, gymnastics, athletics ...	9506	20,60	0,24	0,09%
Machinery parts, not containing electrical connectors, insulators, coils	8485	20,57	0,68	0,05%
Preparations for use on the hair	3305	20,44	0,13	0,04%
Pile fabrics, including long pile fabrics and terry fabrics, knitted or cro ...	6001	20,28	0,04	0,02%
Knitted or crocheted fabrics of a width exceeding 30 cm	6004	20,26	0,35	0,00%
Woven fabrics of combed wool or of combed fine animal hair.	5112	20,25	0,14	0,02%
Music, printed or in manuscript, whether or not bound or illustrated.	4904	20,17	0,82	0,00%
Machine-tools for planing, shaping, slotting, broaching, gear cutting, gear ...	8461	20,16	0,56	0,01%
Textile hosepiping and similar textile tubing	5909	20,15	0,43	0,00%
Postage or revenue stamps, stamp-postmarks, first-day covers, postal statio ...	9704	20,13	0,49	0,00%
Centrifuges, including centrifugal dryers	8421	19,97	0,41	0,09%
Other made up clothing accessories	6217	19,96	0,03	0,02%
Millstones, grindstones, grinding wheels and the like	6804	19,93	0,50	0,01%
Pig fat (including lard) and poultry fat	1501	19,87	0,57	0,00%
Machines and appliances for testing the hardness, strength, compressibility ...	9024	19,75	0,74	0,01%
Refrigerators, freezers and other refrigerating or freezing equipment	8418	19,71	0,23	0,07%
Armoured or reinforced safes, strong-boxes and doors and safe deposit locke ...	8303	19,66	0,26	0,00%
Prepared pigments, prepared opacifiers and prepared colours	3207	19,65	0,47	0,01%
Electrical machines and apparatus, having individual functions	8543	19,64	0,59	0,04%
Machines and mechanical appliances having individual functions	8479	19,61	0,61	0,23%
Chain and parts thereof, of iron or steel.	7315	19,61	0,30	0,02%
Sets consisting of woven fabric and yarn, whether or not with accessories	6308	19,57	0,11	0,00%
Typewriter or similar ribbons, inked or otherwise prepared for giving impre ...	9612	19,52	0,39	0,00%
Safety glass, consisting of toughened (tempered) or laminated glass.	7007	19,50	0,42	0,00%
Other bars and rods of other alloy steel;	7228	19,48	0,40	0,04%
Other organo-inorganic compounds.	2931	19,45	0,96	0,03%
Signalling glassware and optical elements of glass	7014	19,43	0,61	0,00%
Flax yarn.	5306	19,30	0,02	0,00%
Hand sieves and hand riddles.	9604	19,28	0,25	0,00%
Machinery, apparatus and equipment	8442	19,25	0,72	0,02%
Filter blocks, slabs and plates, of paper pulp.	4812	19,22	0,48	0,00%
Transmission or conveyor belts or belting, of textile material	5910	19,22	0,16	0,00%
Glaziers' putty, grafting putty, resin cements	3214	19,18	0,34	0,00%

Product	Code	Pure Densities	Increments	Export shares
Modelling pastes	3407	19,15	0,62	0,00%
Other string musical instruments (for example, guitars, violins, harps).	9202	19,03	0,25	0,00%
Amino-resins, phenolic resins and polyurethanes, in primary forms.	3909	18,94	0,47	0,03%
Prepared foods	1904	18,88	0,07	0,02%
Carbon paper, self-copy paper and other copying or transfer papers	4809	18,87	0,55	0,00%
Articles of stone or of other mineral substances	6815	18,87	0,48	0,01%
Artists', students' or signboard painters' colours	3213	18,83	0,50	0,00%
Parts of railway or tramway locomotives or rolling-stock.	8607	18,83	0,42	0,01%
Hormones, prostaglandins, thromboxanes and leukotrienes	2937	18,83	0,88	0,02%
Other furniture and parts thereof.	9403	18,67	0,07	0,21%
Moulding boxes for metal foundry; mould bases; moulding patterns	8480	18,61	0,45	0,04%
Electrical signalling, safety or traffic control equipment for railways	8530	18,61	0,50	0,00%
Natural or artificial abrasive powder or grain, on a base of textile materi ...	6805	18,55	0,55	0,01%
Other wind musical instruments (for example, clarinets, trumpets, bagpipes) ...	9205	18,44	0,55	0,00%
Automatic goods-vending machines	8476	18,43	0,70	0,00%
Pianos, including automatic pianos; harpsichords	9201	18,43	0,57	0,00%
Photographic film in rolls, sensitised, unexposed	3702	18,38	0,55	0,00%
Knives with cutting blades, serrated or not (including pruning knives)	8211	18,36	0,41	0,00%
Peptones and their derivatives	3504	18,34	0,66	0,00%
Furnace burners for liquid fuel, for pulverised solid fuel or for gas	8416	18,32	0,43	0,01%
Other articles of aluminium.	7616	18,27	0,24	0,05%
Wire, rods, tubes, plates, electrodes and similar products, of base metal	8311	18,17	0,33	0,01%
Wadding, gauze, bandages and similar articles	3005	18,13	0,36	0,02%
Turbo-jets, turbo-propellers and other gas turbines.	8411	18,08	0,67	0,03%
Electric (including electrically heated gas), laser or other light	8515	18,07	0,60	0,01%
Tableware, kitchenware, other household articles and toilet articles, of po ...	6911	17,98	0,00	0,01%
Total				**9,91%**

Source: Author's calculations